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AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY AND MINES.

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Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED AT 105 CHESTNUT ST. PHILADELPHIA.

Saturday, October 23, 1847.

Schuylkill Coal Trade.

These reports for last week reached us too late for insertion.

PHILADELPHIA AND READING RAILROAD.—Amount of coal transported during the week ending Thursday, October 14, 1847.

	Tons. cwt.
From Port Carbon	9,362 13
" Pottsville	4,953 14
" Schuylkill Haven	12,915 01
" Port Clinton	3,838 13
Total for week	31,069 18
Previously this year	1,049,064 04
Total	1,080,134 02

HENRY M. WALKER,
Supt. Coal Tr. P. & R. R. R. Co.

SCHUYLKILL NAVIGATION.—Week ending October 14, 1847.

	Tons. cwt.
Pottsville and Port Carbon	5,076 11
Schuylkill Haven	1,427 07
Port Clinton	00 00
This week	6,503 18
Previously	169,086 02
Total	175,590 00

☞ The Lowell and Andover railroad company has been organized. William Livingston, Esq., is president. It is expected the road will be completed by July next.

Stony Brook Railroad.

This road is designed to open a communication between Lowell and Worcester, (Mass.) and the Connecticut River Valley direct, by connecting at Groton with the Worcester and Nashua road, and the Fitchburgh Railroad.

Essex Railroad.

This road is designed to connect the Eastern Railroad at Salem with Lawrence.

To Car and Locomotive Builders.

The attention of Car and Locomotive Builders is called to the following advertisements. This company has, we understand, changed their policy in this department having decided to purchase Cars and Locomotives from those engaged in the manufacture, rather than to keep up an establishment of their own for those purposes. We presume, however, that they will continue to do their own repairs mainly on their own premeses.

TO RAILROAD CAR BUILDERS.—SEALED PROPOSALS will be received by the undersigned up to SATURDAY, the 6th of November, inclusive, for the construction of 20 HOUSE CARS, for freight, 2 BAGGAGE CARS and 2 MAIL CARS, according to plans and specifications which will be furnished, and for which proposers are referred to the Master of Machinery, at the Company's Mount Clare Depot, Baltimore, who will be prepared to exhibit them on and after the 25th current.

The House Cars to be delivered by the 1st of February, 1848; the Baggage Cars by the 1st of December, and the Mail Cars by the 15th of December next. BENJ. H. LATROBE, Chief Eng. & Gen. Sup't. Baltimore and Ohio Railroad.

2t43 Office No. 23 Hanover St., Baltimore.

TO LOCOMOTIVE ENGINE BUILDERS.

Proposals under seal will be received by the undersigned up to SATURDAY, the 6th of November, inclusive, for furnishing the Baltimore & Ohio Railroad Co. with 4 LOCOMOTIVE ENGINES, in conformity with the following specification:—

1. The weight not to exceed 20 tons, of 2240 lbs., and to come as near to that limit as possible.
2. The weight to be uniformly distributed upon all the wheels, when the engine is drawing her heaviest load.
3. The number of wheels to be *eight*.
4. The diameter of the wheels to be 43 inches.
5. The four intermediate wheels to be without flanges.
6. The boiler to contain not less than 1000 square feet of fire surface, of which there shall be not less than one-fifteenth in the fire box.
7. The tubes of No. 11 fine iron, with not less than ¼ of an inch space between them in the tube sheets.
8. The fire box with the exception of the tube and crown sheets to be of ¼ inch copper.
9. The tube sheets to be ½ inch thick.
10. The boiler to be of No. 3 iron, of the best quality.
11. The fire box to be not less than 24 inches deep below the cylindrical part of the boiler.
12. The steam to be taken to the cylinder from a separate dome on the fore part of the boiler.
13. The frame, including the pedestals, to be entirely of wrought iron, and the boiler to be connected therewith, so as to allow of contraction and expansion without strain on either.
14. The cylinders to be 22 inches stroke, and not less than 17 inches diameter.
15. The cut off to be effected by a double valve, worked by separate eccentrics.
16. The angle of the cylinder to be not greater than 13½ degrees with the horizontal line.
17. The frame and bearings to be inside the wheels and the direction from the cylinder direct with the back pair of intermediate wheels.
18. The centres of the extreme wheels to be not more than 11½ feet apart.
19. The wheels to be of cast iron with chilled tire.
20. The means to be provided of varying the power of the exhaust in the blast pipe.
21. The engine to be warranted to do full work with Cumberland or other bituminous coal, in a raw state, as the fuel—and the furnace to be provided with an upper and lower fire door with that view.
22. The smoke stack to be provided with a wire gauze covering.
23. Two safety valves to be placed upon the boiler, each containing not less than 5 square inches of surface and one to be out of the reach of the engineman.
24. The tender to be upon 8 wheels and constructed upon such plan as shall be furnished by the company, and to carry not less than 3 cords of wood or its equivalent in coal, and 1500 gallons of water.
25. The materials and workmanship to be of the best quality, and the engine to be subjected to a trial of 30 days steady work with freight upon the road, before acceptance by the company.

Payment to be made in cash on the acceptance of the engine. The four engines to be delivered at the company's Mount Clare depot, in Baltimore—the first on the 1st of February, 1848, and the three others on the 1st of March, April and May, ensuing.

The track is 4 feet 8½ inches gauge, and the shortest curve of the road is 400 feet radius.

The company to be secured against all patent claims.

Further information will be communicated upon application to the undersigned, at the company's office, No. 23 Hanover street, Baltimore, to which the proposals suitably endorsed will be addressed.

By order of the President and Directors,

BENJ. H. LATROBE,
Chief Engineer and General Superintendent.

Baltimore, Sept. 18th, 1847. 2t43

Iron Tubes for Locomotive Boilers,
And the Mode of Securing them to the Tube Sheets.

We observe that Professor Johnson, in his able article on the "Use of Anthracite Coal in Locomotives," which we re-published in No. 39, from the August number of the Journal of the Franklin Institute, refers (page 615) to the difficulty of making iron tubes tight in the tube sheet. There has been, we believe, considerable difficulty in this matter—but *Mr. Thomas Prosser*, of 28 Platt street New York, who manufactures the lap-welded tubes, has an implement which he calls "*Segment Tube Cutter*," and which is used with great facility, forming, at the same time, a substantial shoulder both on the inside and outside of the tube sheet, or head of the boiler. The operation of this implement is very different from the ordinary mode of rivetting the tubes. It is composed of a ring—eleven segments of a circle of a peculiar shape within the ring, and in the centre of these segments a round tapering mandril, or pin, is driven, acting as a wedge as it is driven in, setting out the segments, and forming an internal and external shoulder, which ensures a tight joint. This is a very simple, yet very ingenious machine, or implement, and ought to be in the hands of every boiler maker who uses iron tubes.

Pottsville and its Machine Shops.

It would be somewhat difficult for a person resident in, and who left the little village of Pottsville, Schuylkill county, Pa., *twenty-five years* ago, to recognize the place on his return to it at this time.—In 1824, there were but *five* houses—now there is probably *fifteen hundred*—with *eight* or *nine* thousand inhabitants, most of whom are directly, or indirectly, connected with the coal business. Among the establishments which attract the attention of strangers, are the machine shops of *Messrs. Haywood & Snyder* and *E. W. McGinnis*—which supply the steam engines, and large amount of machinery, for the numerous collieries, and manufacturing establishments of the coal region. These establishments have both grown up from simple *blacksmith shops*, to the employment of from *one* to *two* hundred hands each.

The establishment of Mr. McGinniss is, we believe, employed mainly in the manufacture of engines and machinery for coal operations—but that of Haywood & Snyder who had also an establishment at Danville, on the Susquehannah, has acquired a high reputation for making the machinery for rolling mills. They have not only furnished the machinery and *rolls* for several of the mills in this State, where railroad iron is made, but also for the large establishment of Mr. Cooper, at Trenton, N. J., and even for one or two mills in Massachusetts—thus showing conclusively that *merit*—however modest and retiring—will be discovered and appreciated.

The visiter to this establishment at Pottsville can readily trace, and almost note the years of the growth of this concern, by the various additions and extensions of the buildings. The veritable old smith's shop, we believe, is still standing, in which Benjamin Haywood, the very enterprising and intelligent seignor partner, made *horse shoes* and *horse nails*, when he first came to the place. This is a remarkable instance of the success, and prosperity, of honest industry, guided by good judgment, and extraordinary energy of character.

We are not aware how long Mr. Haywood worked by himself—but we find him now connected with two partners, men of character and business habits—Mr. G. W. Snyder, in the department of machinery, and Mr. Benjamin Milnes, in the coal mining and its various operations. We are told that the aggregate amount of their business, in the two departments—machinery by Haywood & Snyder, and coal by Haywood & Milnes—amounted in 1846 to *over seven hundred thousand dollars*.

Let the young men of this country, and of other countries too—for Mr. Haywood is a native of England—and especially young *mechanics*, learn a lesson from this, and recollect that *industry, perseverance* and *integrity* may be as successful at the *anvil*, or in other mechanical pursuits, as in mercantile operations or the learned professions—and twice as useful.

Kirk's Steam Tilt Hammer.

We saw at the Machine Shop of the Reading Railroad Company, in Reading, a few weeks since, three of these very useful implements in operation. They are constructed in the form of the ordinary, tilt, or *trip*, hammer—but the power is applied in a very different manner. Instead of the ordinary machinery for such purposes—a large fly wheel, etc.—you see a small cylinder, but little larger, or higher than your *hat*, placed under the lever, or beam, to which the hammer is attached—in front of the frame in which, or the pivot upon which, the lever operates. In this cylinder moves a piston with a perpendicular motion, giving action to the hammer.

The first, or smaller one, put in operation by Mr. Kirk, was for ordinary purposes, in the blacksmith shop, and so rapid is its movement, and delicate its touch, that it might be used for making horse nails.

The next put in operation, was in the same shop, and is used for working up the immense quantity of scrap iron which has accumulated about the shops of the company, by which means they are now supplied with a large amount of the very best iron for the ordinary work of the shops. After using these hammers for a time, and finding their great utility, the company have erected one of much larger dimensions, with which they are working over, and bringing again into use, their *thousands* of old *axles*, and working up, we suppose, their condemned rails.

We should like, right well, to give a more intelligible description of this exceedingly useful machine, as we deem it worthy of being generally known—as to understand it fully, will be to introduce it extensively into use.

When at Boston recently, we saw a model of it at the fair—where it attracted considerable attention. We hope to get a full description of it, with drawings, from Mr. Kirk soon, when we will refer to it again.

Hinckley & Drury's Locomotive Engines.

It is but a short period, two or three years, since we first met with an engine built by these gentlemen; and never visited their manufactory until March, 1846—when in Boston for a day or two, we had the pleasure of spending an hour in their shop, where we found specimens of excellent work. They were then materially enlarging their workshop, in order to be able to fill the orders which were increasing upon them.

When recently on a visit to Boston, and its vicinity, we saw numerous practical—we might almost say *breathing*, if not living—witness of their industry and skill, for we found their engines in general use. We saw them at work on every New England road that we visited—and on some of the roads we saw no others. It was our intention to have visited their shops again, but a rainy day prevented. We however met one of the gentlemen at the Fair—learned that their orders have fully kept pace with their increased ability to meet them, and that for a considerable time they have turned out an engine a week—or at the rate of *over fifty a year*.

We have, in our office, lithographic prints of their six wheel engine with one pair of drivers, and their eight wheel engine with two pair of drivers; but are not aware that any of their engines have found their way south of the Long Island road yet, but understand that they are finding their way westward into Michigan; and they are sure to find their way into Ohio, Indiana and New York, for two reasons—first, because they are equal to any others made in the country, and, secondly, because the Boston people, who are interested in the western roads, know their worth, and seldom neglect their own mechanics, when they have an opportunity to serve them.

Lowell and Andover Railroad Company.

At the annual meeting of this corporation, held yesterday, says the Lowell Courier of 19th instant, the following Directors were chosen for the ensuing year, viz: William Livingston, Sidney Spalding, Otis Allen, Frederick Parker, Horace Howard, Isaac Farrington and Abner W. Buttrick. Afterwards, at a meeting of the Directors, William Livingston was elected President, Frederick Parker, Clerk, and John A. Knowles, Treasurer. This road, which is twelve miles in length, will be connected with the Boston and Lowell, the Nashua and Lowell, and the Stony Brook Railroad, at Lowell, and with the Boston and Maine and the Essex Railroad, and a branch railroad leading to Lawrence, near the bridge on the road leading from South Andover to Lawrence. The Lowell and Andover Railroad will, it is expected, be completed by the first of July next, when there will be a continuous line of railroad from Portland, through this city to Albany, with other railroads extending from it at frequent intervals, and running in various directions.

Ray's Improved Car Wheel and Truck.

The plans of wheels for railway cars are almost "too numerous to mention;" many of which have been improvements upon those in use before, and some not.

When recently in New York we saw a new plan of wheel, invented by Mr. F. M. Ray, and which may be termed the "cushioned wheel"—as it is cast in two parts, and has a layer of caoutchouc—or *prepared* india rubber—$\frac{1}{16}$ths inch thick, between the parts. The centre part of the wheel, comprising about $\frac{1}{3}$ths of its diameter, is cast in one part and without those openings in the hub, usually left to accommodate the shrinkage of the iron. The hub, or bearing upon the axle, is rather longer than usual, and the body of the wheel, of the part between the hub and the outer rim of *this part* is strengthened by ribs on the inside, extending like spokes from the hub to the rim. The tread of this part is about 2$\frac{1}{2}$ inches broad, and flat. The remaining part of the wheel, equal to about one-fourth of its diameter, is cast separate upon a *chill*, like other cast-iron wheels—thus forming about as much of the wheel as would be occupied by wood felloes with a wrought tire and flange. The external diameter of the inner part is smaller than the internal diameter of the outer part, or rim of the wheel, by which there is a space, the entire circle, of $\frac{1}{16}$ths of an inch between the two parts, which is filled by vulcanised india rubber, or caoutchouc, prepared in a certain way; which gives it a most extraordinary tenacity and firmness—yet retaining its elasticity. The two parts are put together and held in place by flages and bolts—not easily described without drawings—apparently as solid as the wheels in general use,

while this cushion of india rubber serves to prevent the ordinary concussion of the wheels upon the rails; and thus prevents, it is believed by those who have examined them,—at least to a very considerable extent—the wear and tear of machinery and rails. Its effect is said to be much like putting the rubber *on the rail* and passing the wheel over it,—yet it does not, of course, like that operation, prevent, or at all interfere with, the adhesion of the wheel upon the rail. We are informed that a car, with these wheels, is in use upon the New Jersey Railroad, between Jersey City and New Brunswick, and that it is very much approved of. One of Mr. Ray's Trucks, with these wheels, was exhibited at the Fair in Boston; and we understand that a company has been formed there for the purpose of furnishing wheels of this pattern, and manufacturing cars upon a large scale.

Railway Cars and their Improvements.

When at Boston, a short time since, we saw one of the most beautiful and highly finished cars that has fallen under our observation. There were seats for sixty persons—finished in the most tasty manner, with spring seats covered with crimson velvet, of a very rich pattern. It was constructed by Davenport & Bridges, of Cambridgeport, near Boston, upon their most approved truck, hung in such a manner as to have a lateral motion, by which the side thrust, and shock from inequalities of the road, are in a great measure avoided. Cars of this kind are in use, we are told, on the Eastern railroad, where they are very much admired. Indeed the cars of Davenport & Bridges are in high repute wherever used.

Great Western, (Canada,) and the Buffalo and Mississippi Railroads.

We give place to the following communication, at the request of the writer, that both sides of the question may be heard—and in the hope of directing attention to the important line which must be constructed on the south side of the lake, and from lake Erie to Chicago. That region of country is exceedingly fertile, and becoming too populous to remain long without participating in the advantages of easy, cheap and rapid communication with the seaboard, especially as there is to be a rival line on the north side of the lake, and another through the *central* portions of *Ohio*, *Indiana* and *Illinois*, to the Mississippi. It does not require the gift of prophecy to fortel these events—indeed, an ordinary share of sagacity, reasoning from past to future, will see that there must be a line of railroad on the south side of lake Erie to Chicago and Galena. This communication calls attention to the south side, or central line, and refers to a report of reconnoisance and surveys, to sustain the position that it is the true line. We shall publish a part of the report referred to, that its comparative merits may be understood.

The communication is as follows, viz:

For the American Railroad Journal.

In the able and interesting report of CHARLES B. STUART, chief engineer of the Great Western (Canada) railway, published in the Journal of the 18th and 25th September, there appears to be several errors of fact and reasoning, the correction of which may benefit some of your readers; and therefore I beg leave, with great respect for the author of that report, to notice some of its more important inaccuracies.

Speaking of a great line of railway westward from the lower end of lake Erie, the report says:—"This westward line cannot be deflected to the south, for lake Erie lies in the way." This is a mistake. A route from Buffalo to pass the south bend of lake Michigan is shorter by the south shore than by the north shore of lake Erie. The report says of the route through Canada: "I know of no case in this country, or elsewhere, comparable with this, and it is doubtful whether another location, of the same extent, can be found on the continent, so well adapted to the attainment of high velocity and great economy of transportation." There are routes in the west, and very many of them, of equal length, still more favorable for horizontal and straight railroads. That around the south shore of lake Erie need not have half the elevation (360 feet) of the Canada route to overcome, and it would be straight enough for all practical purposes.

"The belt of country extending from the Hudson to the Mississippi, through the centre of New York, Canada West, and Michigan, is the most even and uniform that is to be found in any parallel, between the western waters and the Atlantic coast."

This may be true as applied to the country eastward of Buffalo, but it is quite erroneous respecting the country west. From the western extremity of lake Erie, at Toledo, a route hundreds of miles in length, of easier grades than that of the Central railroad of Michigan, may be found in any direction from west to south. As proof of this assertion, I would refer the enquiring reader to the surveys of a railroad from Toledo to Chicago, and of the Wabash and Erie and the Miami and Erie canals. A straight line from Toledo to St. Louis, 370 miles long, would offer fewer obstacles to the construction of a railroad than any line across the peninsula of Michigan, which has been surveyed.

The report says, that passengers for Detroit will save 126 miles, by taking the north side instead of the south side of lake Erie, even after the completion of the New York and Erie railroad and the eastern line of projected railroad on the south side of the lake. This is an exaggeration of the difference, but that is not important; for any one may see by a glance at the map, that all passengers between the east and the west are not obliged to pass through Detroit. If passengers are bound as far south as the south shore of lake Michigan, they will find the American route, south of lake Erie, the shortest. Mr. Stuart, therefore, claims too much for the Central railroad, when he allows it any portion of the trade or travel of Indiana, Illinois, Wisconsin or Iowa—unless it be obtained across lake Michigan, or in competition with the railroad to Toledo, fifty miles shorter. The navigation of lake Erie, the report represents to be more dangerous than the ocean. Here is room for a difference of opinion. I think the navigation of lake Erie much less dangerous than any portion of our Atlantic coast of the same extent.

The report represents the exports of breadstuffs from lake Erie, in 1846, at upwards of fifteen millions of bushels; of which it says a large proportion, besides that which was shipped at Detroit, "was carried from ports west of Detroit, directly past the two termini of your (Great Western) road." This is a wide error. Detroit furnished 2,438,635 bushels, and the ports of lake Erie, from Monroe to Cleveland, inclusive, sent forward within a fraction of ten millions bushels. The whole quantity of breadstuffs which passed Port Sarnia and Detroit, was considerably within three millions of bushels—being less than was shipped from the single port of Toledo. (See Hunt's Merchants' Magazine, vol. xvi, p. 363, 364, 365.) Of the two and a half millions bushels of breadstuffs which passed out of lake Michigan, not much over a quarter of a million would have passed Sarnia and Sandwich, if a railroad had been in operation from Chicago to the west end of lake Erie at Toledo; supposing the estimate of the power of railroads to compete with lake navigation, made in this report, to be correct. Upwards of two millions went forward from Chicago, Michigan city and St. Joseph, all of which would be arrested and borne across the peninsula to Toledo, if it could be stopped at Sarnia and Sandwich and carried across to Hamilton by the Great Western railroad. In the former case the saving in distance by railroad is more than two-thirds; in the latter, less than that proportion. A glance at any correct map will show the advantage of proportionate saving of distance to be in favor of the Michigan peninsula, between Michigan city and Toledo, over the route across Canada, from Sandwich and Sarnia to Hamilton. The route for the railroad across the Michigan peninsula is not inferior to that across the peninsula of Canada; for proof of which, I refer to Mr. Baldwin's report, of which a copy was, some months ago, forwarded to the editor of this Journal.

In making the map to exhibit to advantage the Great Western railroad, there are some omissions, to which I beg to call the attention of your readers. The western end of lake Erie has much resemblance to the western extremity of lake Ontario. Both penetrate deeply into the country, and thereby hold commercial sway over the territory for which they offer the nearest ports. Hamilton and Toledo hold these favored positions.

The map purports to give all the public improvements which have any bearing on the work recommended in the report. Yet it neither gives Toledo any place, nor does it vouchsafe a place for the Maumee river, which drains a country half as large as the lower peninsula of Canada West. But, less excusable than these omissions, it leaves out two long lines of navigable canals, centering at the west end of lake Erie, in Toledo, and having a course, now in navigable condition, of 460 miles. Still less excusable is the omission of one hundred miles of railroad now in operation, running nearly parallel with the favorite Central road, and terminating by two branches in Monroe and Toledo. This road extends 70 miles from Monroe to Hillsdale, having a connection at Adrian with a branch 33 miles long to Toledo.

The railroad recommended by the report of Mr. Stuart has great merit. It should be made, for it will pay well. Having merits of its own, it should stand on them, neither claiming what is due to other routes, nor detracting from their just claims.

In the remarks above, I have corrected some of the errors which the report seemed to me to contain. All are liable to mistakes, and none are more willing to be corrected than those who labor for the public good, as engineers of our principal works.

Yours truly, J. W. SCOTT.

Iron Trade.

The iron trade has improved since our last advices. Rails are quoted, October 1st, at £9 average, and chairs £5 15s. à £6; swedish £11 5s.

The monthly report says Welsh bars are still in good demand, and the price is consequently firm; the same may be said of Staffordshire. Scotch pig declined a little during the latter part of September, owing to several parcels having been thrown on the market by parties desirous of realising, but most of the purchases were for home use. The majority of the men who had struck have returned to their work, at the reduced wages proposed by the masters. A few sales of Swedish have been reported for the American market. In steel nothing doing.

COPPER remains steady, with a fair demand. About 240 tons of refined Chilian, in ingots, and a small parcel of slabs, have been recently imported

here: the former is held at 93l., and the latter at 84l. per ton.

Glasgow Pig-Iron Trade, September 30.—The business done this week in Pig-Iron has been moderate in amount. Commercial embarrassments, and the continued tightness in the money market, have caused a farther decline in prices. Several sales of mixed Nos. have been made at 64s., cash, at which we quote the price to-day.

Oregon or Pacific Railroad.

This gigantic project is attracting the attention of able men. Mr. Whitney has succeeded, by his energy and great familiarity with the subject in all its bearings, in arousing an interest in its favor in almost every part of the country. He has travelled many thousand miles, and conferred with many eminent men, and made many addresses to legislative bodies and popular meetings, that his views and wishes, and intentions may be fully known in relation to it; and he has succeeded, by his able argument, his clear and forcible illustrations, and the *great desire* of the people for such a work, in enlisting thousands in its favor; and the project is now evidently gaining ground with the people.

We have had on our table, for several weeks, an able letter in its favor from the Hon. *Zadock Pratt*, of Green county, New York—which ought to have been published before—taking strong ground in favor of the project. Mr. Pratt has evidently investigated the subject, and he gives many important facts, not generally understood, which may be useful as a matter of reference. We are indebted to the National Intelligencer for a copy of the letter.

To the People of the United States.

The subject of a passage across our Continent to the Pacific is exciting the attention of the public mind to such an extent as makes it necessary for every statesman and citizen interested in the welfare, prosperity, and future greatness of our country, to examine the subject, for his own satisfaction at least.

Two routes and modes are proposed to accomplish this great object. One by a canal or railroad, somewhere from Panama to Tehuantepec, in Mexico, between latitude north 7° and 16°; and the other a railroad, from Lake Michigan, through the Rocky Mountains, to Oregon, on the parallel of about 42½°, all on our own territory. I wish first to consider the canal, and see what it would and would not do, and see how we can build it.

The Hon. Mr. Wheaton, late Minister at Berlin, in his very able letter to the Secretary of War, shows that he has studied the subject, and made himself acquainted with all the lights then before the world; and even he leaves all in doubt and conjecture. If it can be done at all, it must be by the combined efforts and influence of all the different commercial nations interested. The English reviewers take the same view, giving to each nation its proportionate interest and influence, comparative with its amount of commerce with Asia, which of course would give the entire control to England. Would the people of the United States submit to such control? And does the constitution provide for the forming and carrying on such a copartnership? Clearly not.

In Gen. Garella's very able, and the only scientific report of a survey of Panama, in the years 1842 and 1843, with a corps of engineers, under the orders of the French Government, he takes up and examines the routes of Nicaragua and Tehuantepec. His estimate for the former is about one hundred and forty eight millions of francs, for the latter one hundred and fifty-one million four hundred and fifty thousand, and for Panama one hundred and forty-nine to one hundred and sixty-five million. These estimates may be considered as conjectural, as he says he had no comparison as a basis. It would be subject to every possible embarrassment; the sparse population of a lawless character, no security of person or property, and the Mexican Government unable to enforce laws if she had them. A strong military force would be absolutely necessary, from one end to the other, both to support and protect the works and the commerce. An entire absence of material; laborers and material to be taken from a northern clime; subject to heavy expenses in execution, both from climate and local position, the former so uncongenial to our citizens as to render it almost if not quite impossible to sustain them. Therefore, the work could not be done, protected, or commerce carried on. It is fair to presume the results would far exceed Gen. Garella's estimates. In fact, another estimate by him for Tehuantepec is as high as 181,450,000f., and from all our experience in such estimates, and the fact that the people of the North cannot live in such a climate, the winter months so rainy and summer so hot that no men could work or stand it, we have good reason to believe that the actual cost would very far exceed any estimate made. General Garella abandons all as inferior, and devotes all his effort to Panama.

Now the question is, can we do this work; and how; and what would be the probable results? It is, I think, perfectly clear that our Government cannot furnish means, nor enter into such a copartnership. Then, if done, it must be done by individuals. Would Boston, New York, Philadelphia, Baltimore, Richmond, Charleston, and even New Orleans, furnish capital to build a thoroughfare, and population for a city to carry on a commerce under another Government, in the benefits of which they cannot participate, nor derive any income for their capital? This is what no business man would do. And now let us see if this would be so. We will suppose the canal to be built, and all the commerce of Europe with Asia passing through it. Europe would furnish her own vessels for both sides—a ship canal, no transhipments required—and, I ask, what benefit could any city, on all the Atlantic or Gulf coast, derive from it? Surely none. In a political point of view, it would place all the marine, naval and commercial, of all Europe permanently and directly at our doors, in the most commanding position; and, as to our own commerce with Asia, would it be benefited at all by this change of route? Our commerce with Asia is not now large, owing to the fact that climate, distance, and expense prevent an exchange of commodities; which difficulties could not be removed by a canal. The climate would forbid the passage of our produce through it. Nearly all our commerce with Asia is with China, consisting of teas, silks, etc., and, mostly consumed north of Charleston, could receive no benefit from this route, but, on the contrary, would be subject to delays, losses, dangers, and damages from climate, and any benefit to the small amount which might perhaps be taken directly up the Mississippi as far as the mouth of the Ohio would be more than overbalanced by the delays and damage of climate, which none but those acquainted with the business can understand. And would the states and cities north of the Gulf furnish means to the amount of from thirty to fifty millions, and submit to such a tax, barely to put out of their possession and under another Government the route for a commerce which they cannot participate in or ever control? Clearly not. Such, it appears to me, would be the result of the canal, even with all the success predicted. It would be productive to us of nothing but evil. We have declared to the world that we will not submit to any foreign intervention or control of the affairs of this continent; and, at the same time, propose to enter into an alliance, offensive and defensive, whereby we yield the control of the commerce of the world, check and retard our prosperity and destiny for half a century at least, and finally end in a desperate, bloody, and expensive war!

The object of a canal or railroad is to shorten the route from Europe to Asia, and, if possible, bring that commerce, which has controlled the world from time immemorial, across the continent; and, by lessening the expense, shortening the time and distance, and facilitating and increasing intercourse, to increase that commerce by a further and more diversified exchange of commodities. Barely substituting one route for another could not increase, because that alone could not create or produce any new means to sustain it. If a new route opens to production a wilderness, and thereby increases population, with means to sustain it and afford an exchange of commodities, it would, of course, increase commerce; or a new route which would greatly lessen expenses of transit, save much time, increase and facilitate intercourse, would naturally increase an exchange of commodities, and would also increase commerce. But neither of these desirable and all important results can be gained by a canal, because a canal or railroad across any part of the isthmus could not open to settlement and production an extend of wilderness country, as it is not there—Nature here having fixed the bounds over which the genius of man cannot dominate; climate, sterility and all, obstruct his course. And it could not shorten distance and time, lessen expense, facilitate and increase intercourse; as I will show there would be no shortening of distance or time, by giving the exact distances to be performed, both around the cape and through a proposed canal, as has been given to the public by Mr. Whitney, and from the authority of Professor Wittish, of the London University:

To Valparaiso.	Miles.
From Plymouth to Realijo, via canal	5,478
Thence to Valparaiso	3,500
	8,978
To Valyaraiso around Cape Horn	9,400
Difference in favor of the canal only	422
From Sydney to England via proposed canal	14,848
" " via Cape Horn	13,848
Against canol	1,000
From Canton to Eng. via canal, S.W. Moon	15,558
" " via Cape G. Hope, do.	14,940
Against canal	618
From Plymouth to Singapore via canal NEM.	16,578
" " " C. G. H. do.	14,350
Against canal	2,228

From this it appears that if the means could be furnished, the canal completed, no difficulties in its operation and progress, the commerce of Europe and Asia could never be changed to this route; and there are further and almost if not quite insurmountable difficulties yet to name. The climate would not only destroy commodities of commerce, but population. A hurricane, navigation, shoals, rocks, bars, and no harbors. The Commercial Review, of New Orleans, for July, estimates the destruction of vessels and property for eighteen months' commerce of the gulf, at one hundred and fifty vessels;—value, cargoe and all, $6,000,000.

And should we alone attempt to get a canal across the isthmus, any where, it would force Europe to try to get a route across Suez or through Russia. But as we have the route within our own territory, which would forever give us the entire control of the commerce and travel of all the world, and the means costing us nothing to accomplish it, I think it decidedly and clearly our duty to go at it at once, and have it done, and not lose all by looking after that which can do us no good.

Mr. Whitney's plan for a railroad from lake Michigan, through the South Pass of the Rocky Mountains, to Oregon, is so plain and simple that any common mind can understand it. He asks Congress to appropriate sixty miles wide of the public lands, from lake Michigan to the Pacific, for this especial purpose, and as he builds the road he takes the land to reimburse himself. For eight hundred miles, the one-half at the government price it is estimated will build the road; the other half creates a fund for where the lands are poor. When completed, the road to be free to all the world, except for repairs and operations, to be fixed by Congress. The distance from the lake to the ocean is twenty-four hundred miles; the estimated cost when ready for use, $70,000,000. The number of acres required is 92,160,000 waste land, 1,200 miles without timber or navigable streams and of small value; and would it ever settle or be of any value without the road? certainly not. Then the question is, shall Mr. W. take these lands, and, by sale and settlement thereof, build this road, or shall they be allowed to fritter away without any perceptible good? This great highway of nations, the greatest work ever done by men or nations; a road which must forever be the thorough fare between all Europe and Asia; a work which will bring us together as one family, binding us with a bond of iron which cannot be sundered—both useful in war and peace; a work which will give us the command of and make the commerce of all the world tributary to us, adding millions of wealth to the nation and ten-folding its population; a work which shall change the condition of all mankind, bringing all together as one nation in free intercourse and exchange of commodities; a work which must be the means of civilizing and christianizing the heathen, the barbarian and the savage—shall these waste wilderness lands be applied to this noble, this more than glorious purpose? I cannot doubt all will say yes.

When we look at the past, and see how civilization has travelled west, bringing commerce and the useful arts with it; when we see that civil and religious liberty was driven to this continent as its apparent last resting place; when we see the progress and even strides of these United States in wealth and greatness; when we see this vast, this rich continent, yet a wilderness before us, the best climate and country, and under the best government the sun ever shone upon; more congenial to grow the whole man than any part of the globe; placed directly in the centre of the earth—Europe, with more than two hundred and fifty millions of souls on the one side, with the Atlantic, three thousand miles, between us, and on the other side all Asia, with seven hundred millions of souls, and the Pacific, a little more than five thousand miles, between us; and when we know that the earth does not produce enough to sustain the vast multitudes on either side, and nowhere for them to go but to us: and when we know that the building of this great road will open to settlement, production and intercourse with all the parts of the globe, this vast wilderness of twenty-five hundred miles in extent, can we doubt that it is our destiny and paramount duty to go forward and accomplish it? clearly not.

Mr. Whitney proposes to start his road somewhere on lake Michigan, where he can find the lands unoccupied; and thence cross the Mississippi, near Prairie du Chien, in the parallel of about 43°: and thence over to the Missouri, between Council Bluffs and the Big Sioux; thence to the Pass, on the parallel of about 42½°; thence to the best point on the Pacific, St. Francisco or the Columbia river. This route, or starting point, would seem seem absolutely necessary. First, the route must be where the rivers can be bridged; the starting point must be from where the lands can be made immediately available for means, and where the good lands can furnish means for the part where the land is poor, and to furnish timber for the road and for buildings were there are none. The plan could not be carried out from a starting point west of the lake, because there would not be a sufficient amount of lands on the route to ensure success, and because the expense of transportation of material to any other point would cost so much as to forbid the work.—And it is not material to the States, as all would join this at or near the Mississippi, making this the most central for all the Atlantic cities, and for New Orleans, and being about the centre of the continent. New England and New York would have their Buffalo and Erie roads through Ohio; Pennsylvania to Pittsburg and through Ohio; Baltimore to Wheeling and through Ohio, two hundred miles nearer than New York; Richmond her direct and best of all the routes to Cincinnati, and then onward; Charleston to Nashville and to Louisville, or direct through the entire State of Illinois; and New Orleans, with the father of rivers always navigable, to the Ohio; while St. Louis would have the Mississippi and Missouri, and her railroad up the Missouri valley, the first to reach it—all equally located and sharing in all its benefits. Thus uniting and bringing all together at one grand centre; distant from ocean to ocean from either city not over 3,400 miles, performed at a moderate speed in eight days, and at thirty miles per hour in five and a half days, and with the magnetic telegraph outrun the sun by twelve hours; placing us on the Pacific, directly opposite to all Asia; distant from Japan but 4,000 miles, from China but 5,400 miles, to Australia but 6,000 miles, to New Guinea 5,340 miles, and to Singapore 7,660 miles. From London or Liverpool, (latitude about 50°,) to New York, is about 3,000 miles, to be added to the above, when we have the direct route from Europe to all Asia, and much shorter than any other route possible to accomplish.

These distances appear so much shorter than those for the route across the isthmus, that an explanation is required. First, we start from London, latitude 50°, and cross the isthmus in from 7° to 16° north latitude, and about 90° west longitude, thence to Canton, latitude about 23°, and east longitude 113½° or about 170° of longitude, each degree of longitude full 60 miles, making from the terminus of the canal to Canton over 10,200 miles. Whereas, from Columbia river, latitude 46½°, to Shang-hai, latitude about 32°, and east longitude 122°, where all the commerce of China would centre, is 110½° of longitude, measuring on this parallel about 47 miles each, a distance of 5,400 miles.—thus it will be seen that for a vessel bound from the terminus of a canal across the isthmus to China, the shortest and best route would be first to the Columbia river, and then to China. Thus we see that this would gain over that of the isthmus from London to China 3,758 miles, to Australia 2,440 miles, to Singapore 1,398 miles; and New York gains over Europe about 3,000 miles to all these places. This seems to be Nature's route. On this belt, this line around the globe, is almost all the population of the world; on this line is and will be the greatest production of breadstuffs and meat, the sustenance of man and of commerce, adding wealth to the nation; the only route which can of itself furnish the means to build the road, or where the labor of men can make it available. Nature has here smoothed the way, and opened the mountains to let us pass. Then look at our picture, our position, with

this road completed; behold with one hand we reach out over the Pacific to the millions of Japan, China, and all Asia, with our manufactures, our cotton, our tobacco, our hemp, our rice, our flour, our corn, beef, pork, leather, and all our many and various products, and receiving back in exchange their teas, coffee, sugar, spices, indigo, drugs, silks, and various useful and curious fabrics, with gold, silver and precious stones—all, too, with our own ships and our own men; and with the other hand over the broad Atlantic, to all Europe, our various products in exchange for theirs, and receive their surplus population, to whom we give a home, a country, while our body draws to it and controls the rich commerce and wealth of all the world, spreading and circulating from ocean to ocean, thro' every artery, through every city from Texas to Maine, and from the heart, the centre, would spring and flow forth throughout the whole frame, the whole system, the life, the products of man's labor, from the earth, which created, would control and sustain it. The picture is grand, and might be considered a vision, had it any other foundation than the wilderness earth, which by the labor of man is to bring forth all we want, and at the same time richly reward that labor. It is a great plan, a great work; but we are the people to do big things. This we have only to commence; it works itself. Build the first mile and it prepares the way for another. The settler has the means of free transit to market, and his labor is wanted on the road; he is at once made independent and happy. It is the poor man's road, his hope and promise. It is the farmer and mechanic who will receive the greatest benefit; their small means and their labor on the road could purchase the land for 40 to 160 acres; their labor and crops immediately wanted on the road, and if a surplus, a free transit to market. Villages and cities would spring up, from one end to the other, all independent and happy, because the free intercourse with all the world afford a full reward for labor. Then will you take your money and send it out of our country, to be used against your interest, or will you have the Oregon road, which will cost you nothing but your votes? Mr. W. does not ask for one dollar in money, nor will he subject any man to one cent of taxation, and no harm to any; he does not even ask a survey for his route; all he desires is that the waste wilderness land may be placed so that by sale and settlement the means in money and labor can be produced to build the road, and when the road is completed, to be under the control of Congress, of the people, and no dividends. All this he proposes at his own risk and hazard, and if it fails the people lose nothing, as no part of the lands would be granted to him faster than the road is built. It appears to me that this is no mysterious affair—a plain, simple, business plan, grand and sublime, but as simple as grand.

I examined this subject nearly three years ago. I then endorsed it, and presented Mr. Whitney's memorial to the 28th Congress. Since that time it has grown upon the public mind, and I believe the people will have it, and the sooner the better. Z. PRATT.

FURTHER SHIPMENT OF COPPER—GOLD AND SILVER ON LAKE SUPERIOR.

A Detroit correspondent of the Tribune, under date Sept. 9, 1847, says:—"There are now at the Sault, 100 tons of native copper and copper chippings belonging to the Pittsburgh and Boston Company, brought down by the Napoleon on her last trip. The Propeller, it is expected, will bring fifty to seventy-five tons more. Col. McKnight is now loading a propeller here with supplies for this company, and will bring down, by the last of next week, another cargo, which, added to that already shipped, will make 334 tons shipped this season. The poorest portion of the cargo of the Jena, yielded 65 per cent. of copper. The produce of this mine alone, this year, must equal, at least, three hundred tons of pig copper.

"We learn that Mr. Seymour, the distinguished German metallurgist, now in the mineral country, with Gen. James Wilson, of New Hampshire, has demonstrated that this native copper, particularly that at Copper Falls, contains alloy of both silver and gold, which gives it that peculiar bright appearance which distinguishes it from English copper. Another year's work will convince all, that we can do better than import copper from England."

LAWRENCE SCIENTIFIC SCHOOL.

ABBOTT LAWRENCE, Esq., of Boston, sometime since gave fifty thousand dollars for the endowment of a school at Harvard University, for the purpose of teaching, more thoroughly than has been common in this country, Geology, Mineralogy and Engineering. At a meeting of the Corporation of the University, at the late commencement, it was resolved to call this department the "Lawrence Scientific school." The American Mining Journal, published in New York, gives the resolutions of the Corporation, and accompanies them with the following remarks.

At a meeting of the corporation of the Harvard University, on the day of the late commencement, the following vote was passed:—

"*Whereas*, Hon. Abbott Lawrence, of Boston, has presented the sum of fifty thousand dollars to the President and Fellows of Harvard College, as an endowment of the Scientific School in this University, and for the foundation of Professorships of Geology and Engineering in the same, it is, therefore, unanimously

"*Voted*, By the President and Fellows, in token of their gratitude for this munificent donation, and in perpetual commemoration of the same, that the Scientific School, be henceforth, known and designated as the 'LAWRENCE SCIENTIFIC SCHOOL, in the University of Cambridge.'"

Mr. Lawrence, whose munificent gifts to various objects of public and private charity had before attracted a large share of regard, has conferred lasting honor on his name by founding this school; which, if well managed, must prove to be of the greatest service to the interests of this country and the world.

On the other side of the Atlantic, the necessity of establishing similar schools for the acquisition of knowledge in the practical sciences, has not escaped the attention of those entrusted with the administration of public affairs, in the continental States of Europe. In France, M. Dumont, late Minister of Public Works, first proposed the erection of schools of Mining and Engineering, in the Mineral Departments, and the Chambers voted the necessary means without opposition. The Royal School of Mines, at Paris, established under his auspices, is considered one of the best scientific establishments of the French capital. Schools of Mining and Engineering are about being established in the departments of the Loire, Rhone, etc.; one at Orleans and Lyons, which will embrace the whole of that district; one at Montpelier and Bordeaux; one at Douai, which will embrace the departments of the North, comprising the great mining district of Mons, Valenciennes, etc.; one in the department of Sambre and Meuse, and the Upper and Lower Rhine. Men of the highest talent and the most enlarged experience, with good salaries, will be entrusted with the education of the students in those branches; the buildings will be fitted up on a large scale, with commodious lecture rooms, model rooms, and libraries, containing the best works on Mining and Engineering in every language.

The French and other languages will be taught *gratis*; and after having undergone the different degrees of study, both practical and theoretical, in every portion of each branch of learning embraced in the course of instruction, diplomas will be granted to students either as miners or engineers. The education in the department of mining will comprise mineralogy, geology; and all the best systems as yet adopted in every country in mining operations, a chemical knowledge of the various ores and strata, the sinking of shafts, driving of adits, the clearing of the water, and the principles of pneumatic and steam-power, ventilation of mines—in fact, every part connected with exploring, blasting with powder and gun-cotton, and all modern improvements in the science; the making of various metals, etc.

The education in the department of civil engineering will comprise railway surveying, levelling, etc., land and estate engineering, government surveying, geological and marine surveying, the construction of locomotives, railways, and all the requisite materials appertaining to railway cutting, embanking, tunnelling, bridges, and viaducts, the different guages, the construction of ships (wood and iron,) and steam-engines for marine purposes.

In Austria, Mining Colleges have existed for many years, and have furnished many celebrated men to the scientific world. The miners in that country are a "privileged class," being exempt from service in the army and navy, and free from taxation; but they cannot leave the country without first obtaining permission from the Minister of Public Works and the President of the Mining Department.

In Russia there is also an Imperial College of Mines, at St. Petersburg. In Prussia and Belgium there are Schools of Min-

ing in the districts of Liege, Brussels, and Berlin. In Spain, there is one at Madrid, and Rio Janeiro, the Brazils, Havana, Bogota, Chili and Peru, Mining Colleges have been established on an extensive scale;—still there has never been any in England, one of the most important metallic countries in the world, nor in the United States, whose mineral resources, in almost every kind of metal, are vast beyond calculation, until the intelligent and liberal mind of the Hon. Mr. Lawrence laid the foundation for the "LAWRENCE SCIENTIFIC SCHOOL IN THE UNIVERSITY OF CAMBRIDGE." We hail the establishment of this school as auspicious of the highest good to the great and growing mineral interest of this country, as well as to the cause of scientific and practical learning among our people.

The buildings necessary to carry out Mr. Lawrence's intentions, are already in process of erection under his immediate superintendence, and will be completed at an early day.

MINING OPERATIONS ON LAKE SUPERIOR.

We take the following reports, in relation to Lake Superior Mining operations, from the New York Mining Journal of September 15th.

The United States Mining Officer, on Lake Superior, is requiring reports of the progress made in mining operations, from those holding locations, or working the mines in that region. We are very glad to learn that this is the case, and hope through this source, to be able to give to the readers of the Mining Journal the *authentic* information, which all persons, at all interested, so much desire. It will probably turn out that, of more than one hundred associations, formed ostensibly for mining purposes, not more than *thirty* are engaged in mining, and but few of these to any considerable extent. We have, on repeated occasions, expressed the desire that the persons having charge of mining operations, for the various companies, should furnish us with full reports of the progress made at the several mines in their charge; but our desire has, thus far, been complied with in very few instances, and we are left to attribute the neglect either to indifference to letting the world, and particularly the *stockholders*, know what is going on, or to the reason, (quite as improbable, we trust,) that the least said upon the subject the better. The Lake Superior News gives us a little light occasionally, and we hope the Mineral Officer, as from time to time he receives reports, will furnish that paper with the data to enable it to give us more. To the News, of the 28th ult., we are indebted for the following account of operations at several locations:—

ISLE ROYALE AND OHIO MINING COMPANY.—From the reports of the Agents of the Company, Messrs. RANSOM and BLAKE, made to the Government Mineral Officer, for the months of June and July, we learn that the Company are holding locations numbered 1, 3, 6, 8, 9, 10, 11, 34, and 43, made on Isle Royale, by Professor LOCKE, in July, 1843, under permits from the Secretary of War, and heretofore reported to the War Department and to Congress. On the locations, the Company have at present some fifty persons variously employed in clearing the ground at and about the village of Ransom, Rock Harbor, in building houses, and in exploring and opening veins.

At Ransom, several houses have been erected, and preparations made for putting up a smelting establishment, for which the Company have much of the necessary machinery on the ground. Houses have also been erected on each of the locations; and on location No 11, there are houses at several veins. Several acres have been cleared, and planted with vegetables that look remarkably promising, and that have already furnished articles for table use.

A number of veins yielding copper have been opened, and experimental shafts sunk a short distance; but no mineral has been smelted, exported, or prepared for exportation. Several new veins of promise have recently been discovered, and the agents are sanguine in expectations of valuable copper ore.

THE SCOVILL MINE—ISLE ROYALE.—The mine of Philo Scovill is on location No. 40, on northeast end of the Island. In conformity with the Government requisitions, Mr. Scovill reports that he has three men engaged, besides himself, who were employed during June and July last in enlarging their buildings and exploring. A house and smith's shop have been erected, and in the latter a small smelting furnace has been put up. Explorations, with a view to mining, have been made, and a shaft sunk about ten feet. No mineral has been raised.

LOCATION NO. 14—ISLE ROYALE.—The mine of C. G. Shaw, H. A. Ackley, P. Card, and others, is on location No. 14, located in July, 1843, by James Smithwick, and situated on Rock Harbor, bounded south by Lake Superior, west by location 13, (occupied by C. Whittlesey and others,) north by location 37, (occupied by Mr. Duncan,) and east by location 40, (occupied by P. Scovill. Mr. Shaw reports a force of seven men, who were engaged during June and July in erecting and enlarging buildings. Three dwellings, a smith-shop, and a root of provision house, have been completed. Two shafts have been sunk—one twelve feet deep, and the other fourteen feet—besides running a drift of about forty feet. No mineral has been exported or prepared for exportation. They still continue exploring.

QUEBEC MINING COMPANY.—The schooner Chippewa, Captain Angus, came down from Point aux Mines and Mica Bay of the north shore, on Friday last, with Mr. Wilson, government officer, and C. W. Rost, Esq. Clerk of the Quebec Company. From the latter gentleman, and Capt. O. H. Mathews, the resident superintendent of the Quebec works, we learn that every thing connected with their enterprize is progressing most satisfactorily. We have been shown some specimens of rich bi-sulphuret of copper discovered in veins that may be characterized as feeders to the great vein of grey sulphuret which the company are now engaged in developing, and which was more fully spoken of in our paper a few weeks ago. An additional force of some twenty or twenty-five men for these works came up on the last trip of the Detroit, and will be immediately set to work. Indeed, under the energetic and experienced superintendence of our excellent friend, Captain Mathews, the Quebec Mining Company, with present prospects before them, cannot fail of receiving ample reward for their enterprize.

COPPER ORE MINING.

We mentioned yesterday, (says the Detroit Advertiser of the 21st.) the arrival at this port of the propeller "Goliath," freighted with Copper Ore, from the famous Cliff Mines. While at our wharves, she was visited by a large number of our citizens, attracted by the peculiar character of the mineral. The larger part of the ore is in large masses or boulders of native copper, weighing from 200 to nearly 4,000 lbs., twenty of them actually weighing over 2,000 lbs. each. One piece, of a square shape, eighteen inches thick, and apparently pure copper, was marked 3,707 lbs. It was cut from a single mass, weighing, in the mine, 40 tons, or 80,000 lbs. We noticed boulders marked 2,793, 2,000, 3,707 lbs., &c.

A considerable portion of the load was copper chips in barrels. The whole freight on board was 180 tons, and this is but a small share of similar ore ready for shipment.

We learn from a credible source that the company paid in cash to the government agents a per centage on $48,000 for the shipments by the Goliath, rather than pay in kind after smelting.

The shipment is insured for $28,000, and is valued at $63,000. We are told that $12 per ton will pay the forwarders handsomely for transportation from the Sault to Boston.

The shipment, with that by the propeller Cathcart from the Bruce Mine, will test, in some measure, the probable productiveness and value of these mines.

Locomotives, Long and Short Boilers.

The following remarks by the Editor of the Railway Chronicle, in relation to the construction of Locomotives, may be useful to some of our readers and we therefore give them a place.

Long Boiler Locomotives — (Stephenson's.)—Mechanics is generally reckoned one of the exact sciences, and its doctrines are accordingly placed among the truths about which there can be no dispute. In practice, however, it is by no means either exact or indisputable, for there is no class of men among whom there exist greater differences of opinion, more fertile sources of controversy, or more opposite systems of practice, than professional mechanics.

In the construction of locomotive engines, this want of perfect precision, this diversity of practice and opposition of opinion are strikingly exemplified. If there be a subject which from its nature we should fancy to be as clear and plain as a mathamatical problem, and as capable of demonstration as the forty-seventh proposition of Euclid, it would be the determination of the respective powers, properties and functions of locomotive engines of which the forms are given. So far,

however, from this being the case, we have not only no fixed set of recognised principles, but we have actually as great diversity of fashion, tastes, prejudices, predilections for forms, arrangements, and contrivances, as if the coupling of an engine, the length of a boiler, or the size of a wheel, were as much a subject of taste and whim as the cut of a coat, or the length of the regulation feathers in Gen. Pasley's cocked hat. This is well illustrated in the present state of public opinion on what are called "long-boiler locomotives." Our readers remember when six-wheeled engines of an extra length first came into fashion—they may remember, that Mr. Bury's short-boiler engines came next into vogue; by-and-by they were found, or fancied, neither strong enough nor safe enough, and then came in again the long boiler with six wheels. Next we had an outcry from the broad gauge against the unsafeness of the length of the narrow-gauge engine, and now we have the broad gauge themselves building engines exceeding in length anything ever dreamed of by their much maligned opponents.

Now, it is quite plain, that all this party feeling is unwise and unworthy of professional mechanics. We should not be misled by words. There is nothing in the words "long boiler," or "short boiler," that *ipso facto* constitutes an engine either a safe or an unsafe one. A long boiler engine may be a very good one or a very bad one, as a short engine may be. The prejudice and the name should perhaps alike be discarded as likely to mislead.

Our attention has been called to this subject by the recent inquests that have taken place on accidents by railways. In some of them we have observed that much stress has been laid on the phrase "long-boiler engines," as if there were something peculiarly dangerous or bad in any engine with a long boiler. Our opinion, on the contrary, is, after a careful investigation both of facts and principles, that length of boiler is not a source of danger: on the contrary, we believe that both Mr. Gooch's large engine on the broad gauge, and Mr. Crampton's and Mr. Stephenson's on the narrow, all of them long-boiler engines, are perfectly safe.

It may be expedient for the present to confine our attention to the last of these, as it has appeared that one or two of Mr. Stephenson's engines which had long boilers have been exposed to accidents. This is admitted readily, even, we believe, by Mr. Stephenson himself; but what is necessary for our purpose is to observe that because a particular kind of long-boiler engine has been liable to accident, it by no means follows that all other long-boiler engines are also in the same predicament. On the contrary we have found that the cause of the "jumping tendency" of those few engines which met with accident arose from a mal-arrangement and mal-adjustment of wheels, which existed in very few engines, and which was departed from as soon as detected. While, therefore, the public has been deluded into the idea that the long boiler was at fault, it appears that the arrangement of wheels was the real cause of error. In short, we have been led to this conclusion, that it is the length of coupling in relation to the length of boiler, and the respective weights on the wheels with reference to their relative positions, that taken together make one of the old engines either safe or unsafe—so that a short engine may be unsafe with bad arrangement of wheels, even at low speed, while another with a boiler double the length, and wheels better placed, may be perfectly safe even at the highest speed.

For the purpose of placing the subject before our readers in a satisfactory shape, it may not be inexpedient to enter rather fully into the following particulars and facts regarding the so-called long-boiler engines of Stephenson.

The long-boiler engine is one with tubes of 12 to 14 ft. long, instead of 9 or 10 ft., which is the length adopted in other locomotives. The addition to the length was made to use more profitably the fuel, by the greater reduction of the temperature of the gases evolved by the combustion of the coke before they were emitted from the chimney; thereby evaporating a larger proportion of water per pound of coke than had previously been done. This object was most successfully attained by the reduction of the temperature of the gases at the smoke-box end of the tubes from 7 or 800° to 4 or 500°, and an increased power of evaporation in the proportion of 7 to 9. At the time of this important improvement the extreme length of coupling was supposed to be limited to somewhere about 12 ft. The largest narrow-gauge passenger engines then constructed were 14 in. cylinders, and the greatest speed attained about 40 to 45 miles per hour. Engines with four wheels, overhanging weight before and behind them, as great as has ever been introduced into the long boiler engine, and a length of coupling of only 7 ft., had been running for years with safety proved to be as great as that of any other class of engine.

In the first class of long boiler engines the wheels were put under the cylindrical part of the boiler, arranged as in other six wheeled engines, having the drivers in the centre, in order that the coupling might be limited, while the more economical length of boiler was adopted. Inside cylinders 14 inches in diameter, and consequently the cranked axle was maintained. The extreme coupling was 11 feet. This class of engine ran with great steadiness and economy even at the then almost unprecedented speed of 55 miles per hour; but was modified, after about four or five had been made, to obtain a more simple construction, which may be called the second class.

This had the cylinder outside, increased to 15 inches diameter, with the plain axle; the same general form in other respects and the length of coupling being maintained. With the increased power of the cylinders of these engines a greater weight was required to be placed on the driving wheels, in order that the force of the steam should be usefully employed in the traction of the train, and it was found that the bite on the rail, even in ordinary weather, was not sufficient to keep the wheel from skidding. The weight thus placed on the driving wheels was taken principally off the leading pair of wheels, which were those sensitive to any blow that might be inflicted on them by a bad joint or otherwise, and by it lifted from the rails, no longer efficiently steadying the leading end of the engine, which, in fact, oscillated on the pivot of the driving wheels. It was then discovered that this arrangement of wheels was unsuited to engines of the power required for the increased loads and greatly increased speeds then maintained on railroads, and it was abandoned after a small number had been made. Some of these have been permitted to run without the attention to the weighting of the wheels which is so imperatively called for; but a new arrangement, not open to this objection, though maintaining the great advantages of economy and simplicity, has been adopted.

It is necessary, before describing this class of engine, to point out the fact which our experience teaches us, that all engines of great power, whatever the length of boiler may be, having this arrangement of wheels and a coupling which has usually been thought sufficient, have a tendency to rock in the same way as the class of engine we have been describing, arising, we believe, from the same cause. In proof of this it is, perhaps, only necessary generally to draw attention to accidents (engines of this the old class running off the rails) on the Great Western, the Manchester and Leeds, and the Grand Junction railways, which to those who have watched the progress of railway travelling will be a few well known instances out of the many which have really occurred. This has, no doubt, pointed out to the locomotive superintendent of the Great Western the necessity of adapting such a length of coupling as shall effectually neutralize any such tendency—a space (18 feet 6 inches) into which the long boiler (*long* as it has been made by the measurement of the imagination by the repetition of this unmeaning term of reproach) with its fire box might be dropped and suspended.—But to proceed with the description of the long boiler engine, with which we are all most concerned, as being that of which almost all the so called engines have been, and of which all are now being constructed.

This, the third class, has six wheels, the leading pair under the leading end of the engine, with the cylinder between this and the second pair of carrying wheels, while the driving wheels are close to the fire box, and within about 4 feet of the engine. The cylinders are 15 inches diameter, and the coupling varies from 11 feet to 13 feet 6 inches in length. The motion previously described does not and cannot exist with these engines, as the centre wheels have very little weight upon them—acting, as they do, only as a relief to the driving pair of wheels, to which they are placed as close as possible. Of this class there are a very large number running daily, as many as forty being on the London and North Western. The greatest speed

known to have been attained has been by three engines, and we cannot point out an instance, and we have not heard of one, where these engines have, by their uneasy motion, left the rails. The overhanging weight does not exceed that of the four wheeled engines, while the length of coupling is nearly double. Thus we see that the cry against "long boiler engines" is unwarranted by the facts. The boilers in the Great Western new engines are long boilers, probably the longest in existence; but length of boiler is not in itself a source of danger.

A short boiler engine is, *ceteris paribus*, more dangerous than a long one, if the wheels be similarly disposed. Length of boiler is rather a cause of steadiness and safety, provided it be attended with a long coupling of the wheels, i.e., if it has a proportionably long base to stand upon. The great source of danger, or of oscillation at high velocities, is a wrong disposition of wheels, or an erroneous distribution of weights. By carrying too much weight on any one wheel and too little on another, and with too short a coupling, motion of a dangerous nature may be given to any engine, and this may be done whether the boiler is long or short. The most recent examples we have seen of these engines are smooth in their motion and at high speed steady and safe.

ATMOSPHERIC RAILWAY.

According to the following extract from the Plymouth Herald, the atmospheric system is doing better on the South Devon than on the Croydon.

The South Devan Railway—Atmospheric Traction.—We have pleasure in stating that the atmospheric mode of traction, which has now been in constant operation for several weeks, works most satisfactorily. In addition to the four extra trains on Monday, three of the regular passenger trains commenced running atmospherically—8 20 A. M., and 12 30 P. M., up, and 9 50 A. M., down, between Teignmouth and Exeter—no delay whatever is experienced by the change of the propelling power. The piston carriage on the down trains runs on to Newton, where it is taken off with the superfluous carriages, and placed on a convenient line to be attached to the up train when required—so that, on arriving at Teignmouth, the locomotive is removed, leaving the piston carriage to start the train when the signal is given; and on the down atmospheric train arriving at Teignmouth, the engine which has to run in front is instantly attached to the piston carriage, and is ready for the start, at all times, before the guard is ready, or the passengers are arranged. The 8 20 A. M. train, on Monday, started from Newton with the piston carriage, three second class, two first, horse box and carriage truck—all laden. On arriving at Teignmouth, the locomotive bade adieu to its burthen; and when the signal was given, the apparently powerless train moved off—to use our correspondent's words—"with an agility as if some superhuman power were concerned in the operation, the long train proceeding on with grace and ease, without any visible cause of propulsion." The different stations were called at as usual, and the train arrived in Exeter at its proper time. This train is generally heavy, and the taking it on by the new system is a proof of confidence in its operation. The Bath mail up, is taken on by the 12 30 P.M., by atmospheric, from Teignmouth to Exeter. Every train during the past week has worked with the utmost regularity, and the doubts of those who remained unconvinced of the practicability of the system appear now to be entirely dissipated. It is expected that the line to Newton will be opened atmospherically in the course of a fortnight, the apparatus being in a forward state, when it is generally understood that all locomotive power will be dispensed with above Newton.

Smelting Copper Ores.

The following is said to be an improved method of smelting copper ores, and as there is very little known in this country, in relation to this department of useful industry—where *so much is to be done*—we give it, from the London Mining Journal.

In the *Mining Journal* of Feb. 6, we described an improved method of smelting copper, for which Mr. James Napier had taken out a patent: we have now before us a specification of another patent recently secured by the same gentleman, for further improvements in the smelting of such description of ores as he has not provided for in his previous one. In the first plan, when the ore contains little or no sulphur, the calcination described in his previous patent may be dispensed with; and as some copper ores are found to contain sufficient iron, it is not necessary, in such cases, to make any addition of iron, as described in the aforesaid patent. Another part of this specification applies to the treatment of ores containing silver or gold, or both, with alkali, lime, iron, coal, or galena. The first object in this new method is to separate the earthy matters; for this purpose, such an assortment of the ores is made, that the silica shall be in about the proportion of from 50 to 75 per cent.—the other ingredients in the matrix consisting as usual of alumina, lime, baryta, and the fluor spar; oxide of iron causes the mass to fuse more readily; if the ore, or a mixture of ores, employed, contain less than the above proportion of silica, that proportion must be made up by the addition of sand; and, if the mixture contain too large a proportion of silica, lime or fluor-spar must be added to reduce it to the proper proportion. Should the ore contain iron and sulphur, in the proportion of one of each to two of copper, to every ton of ore is to be added 56 lbs. common salt, 40 lbs. lime, and 100 lbs. anthracite coal; these ingredients are then fused in the melting furnace, the slag and scoriæ skimmed off, the furnace tapped, the metal run into sand moulds, and the pigs to be treated as hereafter described. Should the ore contain less than one of iron to two of copper, sulphuret of iron must be added to make up the proportion; or, where the mass has been melted, and the slag skimmed off, add 30 lbs. of scrap iron; when perfectly fused, and the iron has disappeared, the furnace is to be tapped, and the copper run out into sand bowls; when the pigs are set, they are thrown into cold water, in which they become disintegrated and fall into a fine powder; this powder is left exposed to the atmosphere, and then calcined. The oxide of managese may be used instead of iron, but iron is preferable; when the ores contain little or no sulphur, the calcination and disintegration may be omitted. Sand or lime, and oxide or carbonate of iron, is now to be added, to bring the silica and other ingredients to the above named proportions, for the purpose of converting the slag into a glass; 80 lbs. of common salt, 50 lbs. of lime, and 100 lbs. of anthracite coal, all finely ground, and to be added to 1 ton of ore, containing 12 per cent. of metal; but should the ore be richer, less salt and lime would be required, and more anthracite. The time for fusing 25 cwts. of the ore would be about six hours; and, should any regulus be produced, it must be afterwards roasted and refined. When the copper ore contains silver or gold, or both, it is to be calcined and disintegrated, so as to bring it to about 50 per cent.; it is then to be mixed with 50 lbs. soda ash, 50 lbs. slaked lime, 1 cwt. anthracite coal, 1½ cwt. scrap iron, and 4 cwts. galena; the whole is now to be fused, the slag removed; and, when the metal has been well tubbed, the furnace must be tapped, and the metal run into pigs. The lead will be found reduced at the lower part of the first and second pigs, and will contain the whole or greater part of the silver or gold previously contained in the ore; from this lead the precious metals may be separated by the ordinary processes, and the copper regulus is then to be re-roasted, and treated over again with fresh ores. Should the ore containing the silver or gold contain no copper, 4 cwts. of copper pyrites is to be added to every 16 cwts. of the ore, and treated exactly as above described.

GILLESPIES' WORK ON ROAD MAKING.

A Manual of the Principles and Practice of Road-making, comprising the Location, Construction and Improvement of Roads, (Common, Macadamized, Paved, etc.,) and *Rail* Roads, by W. M. Gillespie, Professor of Civil Engineering in Union College. Published by

A. S. BARNES & CO.,
51 John St., New York.
LINDSAY & BLAKISTON,
GRIGG, ELLIOT & CO., } Philadelphia.

RECOMMENDATION FROM PROFESSOR MAHAN.

"I have very carefully looked over Professor Gillespie's Manuel of Road Making. It is, in all respects, the best work on this subject with which I am acquainted; being, from its arrangement, comprehensiveness and clearness, equally adapted to the wants of Students of Civil Engineering, and the purposes of persons in any way engaged in the construction or supervision of roads. The appearance of such a work, 20 years earlier, would have been a truly national benefit, and it is to be hoped that its introduction into our seminaries may be so general as to make a knowledge of the principles and practice of this branch of engineering, as popular as is its importance to all classes of the community.

(Signed,) D. H. MAHAN,
Professor of Civil Engineering in the Military Academy of the United States."
3t42

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or Imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER 17 Burling Slip.
1y10 New York.

NOTICE TO CONTRACTORS.—GREAT WESTERN RAILWAY, CANADA WEST. Sealed proposals will be received until the 1st day of next October, at the Office of the Great Western Railway Company, for the Grading and Masonry of the Western Division, extending from London to Windsor, a distance of one hundred and ten miles; also for the branch to Port Sarnia, forty-five miles in length.

Plans and Specifications of the work can be examined at the Engineers' Office, in Hamilton and London, on and after the 15th of September.

C. B. STUART, Engineer.

Hamilton, July 30, 1844. 2m32

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER Flues.

Manufactured and for sale by

MORRIS, TASKER & MORRIS.

Warehouse S. E. Corner of Third & Walnut Streets,

PHILADELPHIA.

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,

1y Albany Iron and Nail Works.

RAILROAD IRON.—400 TONS ENGLISH, 60 pounds per lineal yard, of best manufacture, and expected to arrive about 1st October by London packets. Apply to

DAVIS, BROOKS & CO.,

1m37 68 Broad Street, New York.

FOR SALE—300 TONS (10 MILES) FLAT Bar Rail, in parcels or wholesale—section 2¼ inches wide by ¼ thick. The Rail has been several years in use, and its quality thoroughly tested—none but perfect bars delivered. Address

I. R. TRIMBLE,

1m37 *Wilmington, Del.*

DAY, CROSKY & ROSS,

COMMISSION MERCHANTS,

57 Threadneedle Street, London.

13 Orchard Place, Southampton.

SHIPPING & COMMISSION AGENTS FOR PASSENGERS, SPECIE, GOODS, PARCELS, etc.

☞ To all parts of the United States, North and South America, West Indies, India, [overland or otherwise,] Constantinople, Egypt, the Mediterranean, the Peninsula, and all parts of France—via Havre.

Agents at Cowes for the Ocean Steam Navigation of New York.

☞ Persons wishing to transact business with Messrs. D. C. & R. will please apply to the subscriber, who will make cash advances on consignments to their address.

July 31—3m ROBERT GRACIE.

LOCOMOTIVE AND CAR AXLES. The Subscribers are now prepared to receive orders for the well known and approved *Reading Locomotive and Car Axles*—drawn to any required pattern from *Bloom Iron only*. Address

SAM'L KIMBER & CO.,

Willow Street Wharf,

4tf Philadelphia, Pa.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersunk heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, *Agent.*

Spikes are kept for sale at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by

JOHN A. ROEBLING, *Civil Engineer*,

Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition. 2v191y

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Ering, Philadelphia; Wm. E. Coffin & Co Boston. ja45

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

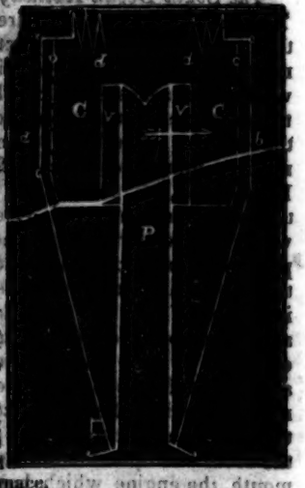
Mill gearing and Millwright work generally; hydraulic and other presses; press screws; calliendiers; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

a45 Paterson, N. J., or 40 Wall street, N. York.

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark Arrester recently patented by the undersigned.



Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

H. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

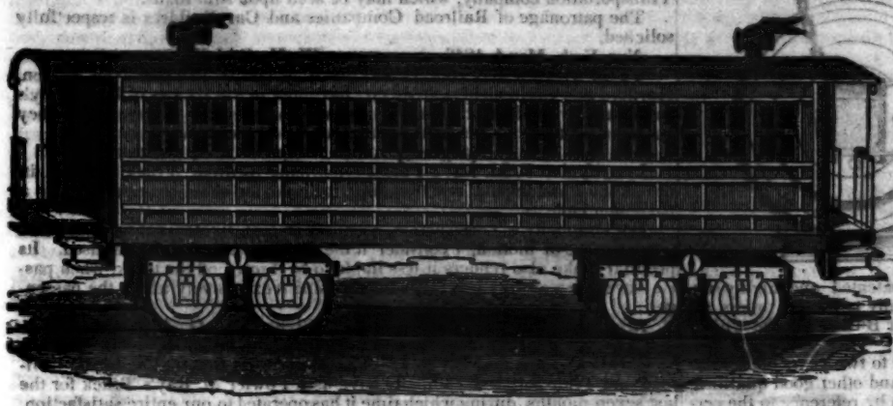
N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

DAVENPORT & BRIDGES'

CAR WORKS, CAMBRIDGEPORT, MASS.

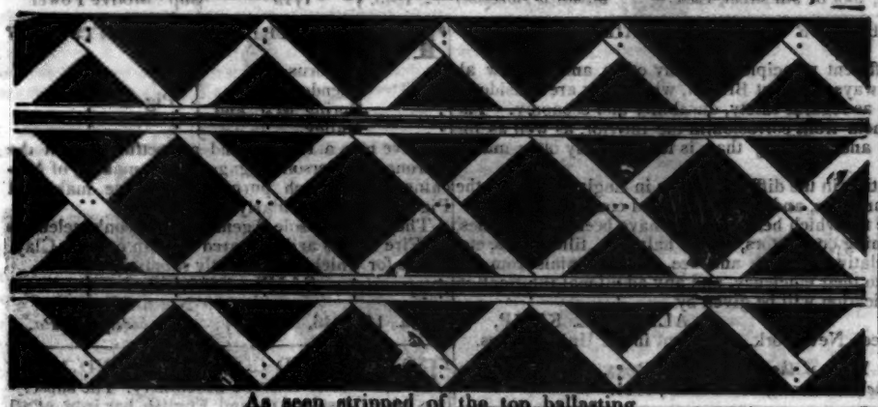


Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes. 10f

THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

THE UNDERSIGNED RESPECTFULLY invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.

4,224 Timbers, 11 ft. long, 3 x 6 inches = 68,696 ft. b.m., at $10 =	$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. = 4,403 ft. b.m., at $13 =	57 24
13,000 Spikes = 2,250 lbs. at 4½ cts	101 25
Workmanship free of patent charge	000 00
Cost of one mile including the laying of the Rail	$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that gives a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON,
Civil Engineer and Patentee,
No. 277 South Tenth St., Philadelphia. 33tf

LAP-WELDED WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,

FROM 1 1-4 TO 6 INCHES DIAMETER,

and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,
Patentee.
1y25 28 Platt street, New York.

RAILROAD IRON.

MOUNT SAVAGE IRON WORKS.

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address J. M. HOWE,
Pres't. Mt. Savage Iron Works,
Dec. 25, 1y* Maryland.

ENGINEERS' AND SURVEYORS'

INSTRUMENTS MADE BY

EDMUND DRAPER,

Surviving partner of

STANCLIFFE & DRAPER.

No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

THE SUBSCRIber has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc. ANDREW MENEELY.
West Troy, May 12, 1847. 1y21

PIG AND BLOOM IRON.—THE SUBSCRIbers are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollow ware, etc. Also several brands of the best Puddling Iron, Juniatta Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
12tf Vine St. Wharf, Philadelphia.

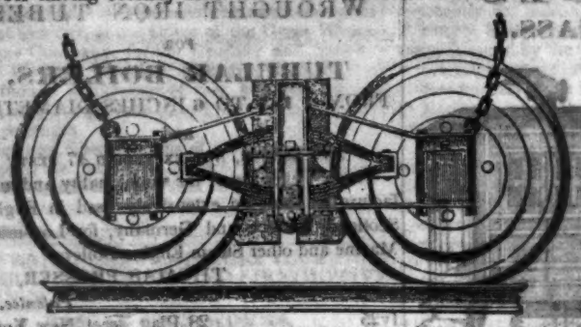
RAILROAD IRON.—THE "MONTOUR Iron Company," Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO.,
Agents.
1y43 77 Pine St., New York.

LAWRENCE'S ROSENDALE HYDRAulic Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors, and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight packages barrels, by JOHN W. LAWRENCE,
143 Front street, New York.

☞ Orders for the above will be received and promptly attended to at this office. 32ty

RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIber having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East river, (of which firm the subscriber was late a partner) under the immediat supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846. W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co. have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed,] WILLIAM ROE, Supt of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845. [Signed,] G. A. NICOLL, Sup,t Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use. [Signed,] T. L. SMITH,

Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car.

For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot, Jamaica November 12, 1845. } [Signed,] JOHN LEACH, 1y19 Sup't Motive Power

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.		CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.	Weight per fathom.	Diameter of iron.	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS. OZ.	LBS.	INCH.	
11	4¼	13	5	10	24 –	50	15-16	20
13	3½	8	3	8½	16 –	27	11-16	13½
14	3¼	6	11	7½	12 8	17	9-16	10½
15	2½	5	2	6½	9 4	13½	1-2	7½
16	2¼	4	3	6	8 8	10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 *cwt. for every lb. weight per fathom, so that a rope weighing* 5 *lbs. per fathom would safely lift* 3360 *lbs., and so on in proportion.* 1y24

RAILROAD SCALES.—THE ATTENtion of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT,
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y30 Philadelphia, Pa.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee G. A. NICOLLS,
je45 *Reading, Pa.*

THE SUBSCRIBERS, AGENTS FOR the sale of Codorus, Glendon, Spring Mill and Valley, } Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

SAM'L. KIMBER, & CO.,
69 North Wharves,
Jan. 14, 1846. [1y4] *Philadelphia, Pa.*

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,
1y45 N. E. cor. 12th and Market sts., Philad., Pa.

RAILROAD IRON.—THE NEW JERSEY Iron Company, Boonton, N. J., are now making Railroad Bars, and are prepared to execute orders for any required pattern. Apply to

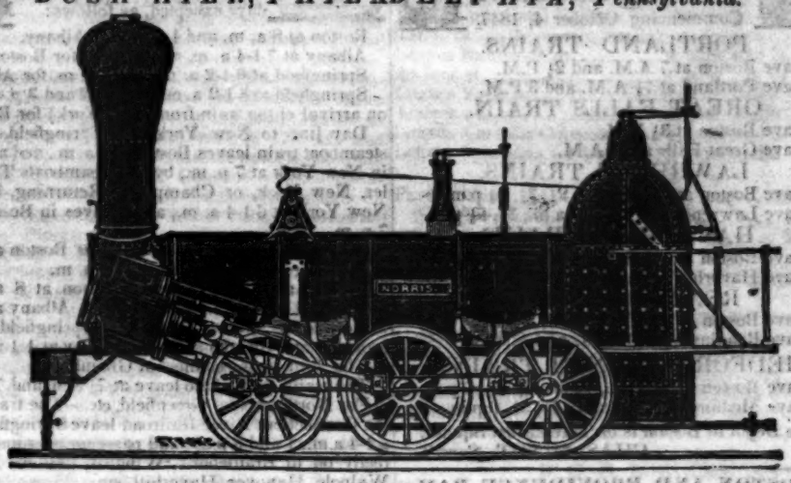
FULLER & BROWN, Agents,
No. 139 Greenwich, corner of Cedar street.
June 1, 1847. 10tf

TO LOCOMOTIVE AND MARINE ENgine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 1y

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter of	Cylinder,	× 20	inches Stroke.
"	2,	14	"	"	"	× 24	" "
"	3,	14½	"	"	"	× 20	" "
"	4,	12½	"	"	"	× 20	" "
"	5,	11½	"	"	"	× 20	" "
"	6.	10½	"	"	"	× 18	" "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

KEARNEY FIRE BRICK. F. W. BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, mos. from delivery of brick on board. Refer to

James P. Allaire, Peter Cooper, Murdock, Leavirt & Co. } New York.
J. Triplett & Son, Richmond, Va.
J. R. Anderson, Tredegar Iron Works, Richmond, Va.
J. Patton, Jr. Colwell & Co. } Philadelphia, Pa.
J. M. L. & W. H. Scovill, Waterbury, Con.
N. E. Screw Co. Eagle Screw Co. } Provicence, R. I.
William Parker, Supt. Bost. and Worc. R. R.
New Jersey Malleable Iron Co., Newark N. J
Gardiner, Harrison & Co. Newark, N. J

25,000 to 30,000 made weekly. 35

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,

a45 President of the Newcastle Manuf. Co.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by A. & G. RALSTON

Mar. 20tf 4 South Front St., Philadelphia.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 1¼ to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 28tf

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A. & G. RALSTON & CO., NO. 4 South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz:
180 tons 2½ x ½ inch Flat Punched Rails, 20 ft. long.
25 " 2½ x ½ " Flange Iron Rails.
75 " 1 x ½ " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures. 1tf

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THE SUBSCRIBERS ARE PREPARED TO execute orders at their Phœnix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
26tf No. 79 Water St., New York.

PATENT INDESTRUCTIBLE WATER Pipes. The subscribers continue to manufacture the above Pipes, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly *indestructible*. The prices are less than those of iron or lead. We also manufacture Basons and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

26tf J. BALL & CO.

CONNECTION BETWEEN THE BOSTON and Lowell and the Boston and Maine Railroads. On and after April 1st, 1847, passenger trains between these two roads, will run as follows, viz:

Leaving Lowell at 7, 11 1-4 a.m., and 2 1-2, 4 1-2, and 6 1-2 p.m., to connect at the junction in Wilmington with the eastward trains—at 7 a.m. and 2 1-2 p.m. with those to Portland; at 4 1-2 p.m. to Great Falls only, with a detention of 45 minutes at the junction, and at 11 1-4 a.m. and 6 1-2 p.m. to Haverhill only. Leaving the junction in Wilmington, for Lowell, at about 7 1-4 a.m. on arrival of the morning train from Haverhill; at about 9 a.m., on arrival of the morning trains from Great Falls. At about 11 3-4 a.m., on arrival of the morning train from Portland. At about 5 p.m. on arrival of the afternoon trains from Haverhill. At about 7 1-4 p.m. on arrival of the afternoon train from Portland.

WALDO HIGGINSON, Agent

PATERSON RAILROAD

Summer Arrangement.

Commencing April 20th, 1847, the cars will leave

Paterson at	New York at
8 o'clock a.m.	9½ o'clock a.m.
11¼ o'clock a.m	12 1-4 o'clock p.m.
4 o'clock p.m.	5½ o'clock p.m.
On Sunday.	
8 o'clock a.m.	9½ o'clock a.m.
4 o'clock p.m.	5½ o'clock p.m.

Office 75 Courtlandt St.

25tf

CONCORD RAILROAD.—PASSENGER Trains in connection with the Lowell & Nashua Railroads, run daily between Concord and Boston, Sundays excepted, as follows, viz:

Leave Concord at 5 40 and 11 5 a.m. and 3 15 p.m.
Leave Boston at 7 and 11 a.m. and 5 p.m.

This road runs by Nashua and Manchester to Concord N. H., where it connects with the Northern railroad, extending from Concord to the mouth of White river in Vermont, 18 miles of which road, to Franklin, is now opened, and the remainder is rapidly completing.

It is the direct route to Central and northern New Hampshire, and to Montpelier, Burlington, and other towns in northern Vermont, and has a greater proportion of railroad conveyance in those directions than any other line.

It is also the British Steam Mail Line, and the nearest route from Boston to the Canadas. Numerous stages connect with all parts of the road.

For further information, apply at B. P. Cheney & Co.'s Express office, No. 8 Court St., and Averill & Dean, No. 15 Elm St.

All passengers' baggage should be properly marked, and when valued at more than $50, notice must be given, and extra charges paid, or no loss beyond such amount will be allowed.

26tf N. G. UPHAM, Supt.

NORWICH AND WORCESTER RAILRoad. Summer Arrangement. Change of Hours. Commencing on Wednesday, April 21, 1847.

Accommodation Trains, daily, (except Sunday.) Leave Norwich, at 6 a. m., and 4½ p. m. Leave Worcester, at 8½ a. m., and 4½ p. m.

☞ The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 3½ p.m. train from Boston.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 6½ p.m., daily, except Sunday, stopping at Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Leave Norwich at 7, and Worcester at 6 30 a. m. Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

☞ *Fares are Less when paid for Tickets than when paid in the Cars.* ☜

3y1y J W. STOWELL, Sup't.

LONG ISLAND RAILROAD COMPANY. Summer Arrangement. On and after Monday May 1st, trains will run as follows, except Sundays:

Leave—Brooklyn at 9 1-2 a.m. for Farmingdale, 1 1-2 p.m. for Greenport, at 4 p.m. for Farmingdale.

Leave Farmingdale at 7 a.m for Brooklyn, 12 m. do., at 3 1-4 do, do.

Leave Greenport at 8 1-2 a.m. for Brooklyn.

Leave Jamaica at 8 a.m. for Brooklyn, at 1 p.m. do., at 4½ p.m do.

On Saturdays, a train will leave Brooklyn for Yaphank, at 4 p.m. Leave Yaphank, on Mondays for Brooklyn at 5 1-2 a.m.

On and after May 15th, and until September 1st, 1847, a train will leave Jamaica at 7 a.m. for Brooklyn—leave Brooklyn at 6 p.m. for Jamaica, and will land and receive passengers at any place between Brooklyn and Jamaica.

On Sundays—leave Brooklyn at 8 1-2 a.m. for Farmingdale; leave Farmingdale at 4 p. m. for Brooklyn.

Freight Trains—leave Brooklyn at 10 a.m. for Greenport; leave Greenport at 12 m. for Brooklyn.

Baggage crates will be in readiness at the foot of Whitehall street, to receive baggage for the several trains, 30 minutes before the hour of starting from the Brooklyn side.

The steamer "Statesman," Captain Nash, leaves Greenport for Sag Harbor on the arrival of the Accommodation train from Brooklyn.

6tf DAVID S. IVES, Sup't.

BOSTON AND MAINE RAILROAD Upper Route, to Portland and the East.

WINTER ARRANGEMENT, Commencing October 4, 1847.

PORTLAND TRAINS.

Leave Boston at 7 A.M. and 2½ P.M.
Leave Portland at 7½ A.M. and 3 P.M.

GREAT FALLS TRAIN.

Leave Boston at 3½ P.M.
Leave Great Falls at 6½ A.M.

LAWRENCE TRAINS.

Leave Boston at 7, 11½ a.m., 2½, 3½, 5½ p.m.
Leave Lawrence at 7, 8½, 11 a.m., 3½, 6½ p.m.

HAVERHILL TRAINS.

Leave Boston at 11½ A.M. and 5½ P.M.
Leave Haverhill at 7 A.M. and 3½ P.M.

READING TRAINS.

Leave Boston at 8½ A.M. and 6½ P.M.
Leave Reading at 6 50 A.M. and 1½ P.M.

MEDFORD BRANCH TRAINS.

Leave Boston at 7½, a.m., 12 m., 2½, 4½, 6 p.m.
Leave Medford at 7, 8½, a.m., 1½, 3½, 5 p.m.

The Depot in Boston is on Haymarket Square.

1y31 CHAS. MINOT, *Sup't.*

BOSTON AND PROVIDENCE RAILroad. Passenger Notice. Summer Arrangement. On and after Monday, April 5, 1847, the Passenger Trains will run as follows:

Steamboat train via Stonington—Leaves Boston every day, except Sunday, at 5 o'clock p.m.

Accommodation Trains—leave Boston at 7 and 10½ a.m. and 4 p.m., and Providence at 7½ and 10½ a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m., 12½, 3½, 6½ and 9 p.m., Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7 10 a.m. and 3½ p.m.

All baggage at the risk of the owners thereof.

25tf W. RAYMOND LEE, *Sup't.*

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m.—Freight train at 1 p.m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 30 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.
Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.
Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.
Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.
White Plains, 7 10 and 8 35 a.m., 12 30, 5 35 p.m.
Pleasantville, 8 15 a.m. and 5 15 p.m.
Newcastle, 8 a.m. and 5 p.m.
Mechanicsville, 7 48 a.m. and 4. 48 p.m.
Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a.m. 4 p.m.
Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.
Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.
White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will precede each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers $1, to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c., to White Plains 50c. 25tf

WESTERN RAILROAD.—ON AND AFter Monday, April 5, 1847, the passenger trains will leave daily, Sundays excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.
Albany at 7 1-4 a. m. and 5 p. m. for Boston.
Springfield at 8 1-2 a. m. and 1 p. m. for Albany.
Springfield at 8 1-2 a. m. and 1 1-2 and 3 p. m. (or on arrival of the train from New York) for Boston.

Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m., and arrives in New York at 7 p. m., by the steamboats Traveller, New York, or Champion. Returning, leaves New York at 6 1-4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at 4 p. m., and arrives in New York at 5 a. m.

Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p.m., Springfield next morning at 8 1-2, and arrive in Albany at 1 1-2 p.m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7½ a.m. and 7 p.m.

For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 8 1-4 a.m., 1 and 3 p.m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N. B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Sup't and Eng'r.
C. A. SEAD, Agent, 27 State street, Boston.

NEW YORK AND ERIE RAILROAD LINE SUMMER ARRANGEMENT. For passengers, twice each way daily, (except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 46, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, $1 50; way-fare in proportion.

For Milk—Leave Otisville at 5½ o'clock, morning and evening.

For Freight—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For further particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

24tf H. C. SEYMOUR, Sup't.

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston.....$21 00
" " " Richmond..... 6 60

For Tickets, or further information, apply at the *Southern Ticket Office*, adjoining the *Washington Railroad Office*, Pratt street, Baltimore, to

1y14 STOCTON & FALLS, Agents.

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, conneting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry — with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12 Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

LITTLE MIAMI RAILROAD COMPANY. Fall and Winter Arrangement, 1847. On and after Monday, September 20th, until further notice, a Passenger train will run as follows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield. Returning, will leave Springfield at 4½ a.m. Upward train arrives at Springfield at 2½ p.m. Downward train arrives at Cincinnati at 10½ a.m.

Freight trains will run each way daily.

Messrs. Neil, Moore & Co. are running the following stage lines in connection with the road:

A daily line from Xenia to Columbus and Wheeling, carrying the great Eastern mail.

Daily lines from Springfield to Columbus, Zanesville and Wheeling. Also to Urbana and Bellefontaine.

A line of Hacks runs daily in connection with the train between Deerfield and Lebanon.

Passengers leaving for New York and Boston, arrive at Sandusky city via Urbana, Bellefontaine & the Mad River and Lake Erie railroad, in 27 hours, including several hours' sleep at Bellefontaine. To the same point via Columbus, Delaware, Mansfield and the Mansfield and Sandusky city railroad, is 32 hours. Distance from Cincinnati to Springfield by railroad.....84 miles.
From Springfield to Bellefontaine by stage, over a good Summer road.....39 "
From Bellefontaine to Sandusky city by railroad.....102 "

FARE—From Cincinnati to Lebanon....$1 00
" " " Xenia.....1 50
" " " Springfield..2 00
" " " Columbus...4 00
" " " Sundusky city 7 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

47tf W. H. CLEMENT, *Sup't.*

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3½ p.m.
Arrives at.....9 a.m. and 6½ p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12½ p.m. and 8 p.m.
Leaves York for Columbia at..1½ p.m. and 8 a.m.
Leaves Columbia for York at..8 a.m. and 2 p.m.

FARE.

Fare to York.....$1 50
" Wrightsville.....2 00
" Columbia.....2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....$9
Or via Lancaster by railroad.....10
Through tickets to Harrisburg or Gettysburg..3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD. Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1·25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above. 35ly

CENTRAL AND MACON AND WESTern Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlantic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20 pr. 100lbs.	35
Crockery, per cubic foot	0 15 " "	35
Molasses and Oil, per hhd., (smaller casks in proportion)	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price,
Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

CENTRAL RAILROAD—FROM SAVANnah to Macon. Distance 190 miles. This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally...	50 cts. per hundred.
On measurement goods.....	13 cts. per cubic ft.
On brls. wet (except molasses and oil).....	$1 50 per barrel.
On brls. dry (except lime)...	80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery.....	40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons.....	$5 00 per hhd.
On molasses and oil.....	$6 00 per hhd.

Goods addressed to F. Winter, Agent, forwarded free of commission. THOMAS PURSE,
y40 Gen'l. Sup't. Transportation.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily.....$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia.....22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.
r25 JOHN KING, Jr. *Agent.*

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

NEW YORK AND PHILADELPHIA RAILroad line—direct. Via Newark, New Brunswick, Princeton, Trenton, and Bristol. (Through in six hours.) Leaving New York daily from the foot of Liberty street.

Morning line.....9 o'clock a.m.
Mail pilot line.....4½ " p.m.

The lines proceed direct to Bristol without change of cars, and thence by the new steamer, "John Stevens," to Philadelphia.

FARE BETWEEN NEW YORK & PHILA.

First class cars.....$4 00
Second class cars.....3 00

Passengers will procure their Tickets at the office foot of Liberty st., where a commodious steamboat will be in readiness with Baggage-crates on board.

Fifty pounds of baggage will be allowed to each passenger in this line, and passengers are expressly prohibited from taking anything as baggage but their wearing apparel, which will be at the risk of the owner.

Philadelphia Baggage-crates are conveyed from city to city, without being opened by the way. Each train is provided with a car, in which are apartments and dressing rooms expressly for ladies' use.

Returning, the lines leave Philadelphia from the foot of Walnut st. at 9 a.m, and 4 1-2 p.m.

The lines for Baltimore leave Philadelphia daily, except Sundays, at 8 a.m., 3½ and 10 p.m., and Sundays only at 10 p.m.—being a continuation of the line from New York. 25tf

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for 1847.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 42 A. M.

Fares.	Miles.	No. 1.	No. 2.
Between Phila. and Pottsville,	92	$3 50	and $3 00
" " Reading,	58	2 25	and 1 90
" Pottsville "	34	1 40	and 1 20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 9tf

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Summer Arrangement.

Philadelphia for Baltimore...8 a.m. and 10 p.m.
Baltimore for Philadelphia...9 a.m. and 8 p.m.
Connecting with Mail Lines North, South & West.

On Sundays, only the 10 P. M. Lines run.

The Boat Lines, via Newcastle & Frenchtown R.R.
Leave Philadelphia at 3½ p.m. } No line on Sun-
Leave Baltimore at 3 p.m. } day.

Accommodation Trains between Philadelphia & Wilmington.—Philadelphia to Wilmington, 8 a.m., *mail*, 12½ p.m., 4 p.m., 7 p.m., 10 p.m. *mail*. Wilmington to Philadelphia, 7 a.m., 1 p.m., *mail*, 4½ p. m., 7 p.m., 12½ a.m., *night mail*.

J. R. TRIMBLE,
9tf *Engineer and General Superintendent.*

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES. AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—39 miles from Chattanooga, Tenn.

RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston and Dalton. 408 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot	$0 18	$0 28
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc	0 40	0 65
	Cotton, per 100 lbs.	0 45	0 75
	Molasses, per hogshead	8 50	13 50
	" " barrel	2 50	4 25
	Salt per bushel	0 18	
	Salt per Liverpool sack	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation.

Augusta, Ga., July 15, 1847. 44-1y

RATES OF FREIGHT

On CHANDLER'S Through Transportation Line, between Charleston, S. C., or Savannah, Ga., and Decatur, Ala., and Knoxville, Tenn., and all intermediate points on the Tennessee River, viz:

Between Macon and Chattanooga.	and Decatur and immediate points.	223	1 54	1 05	0 81	0 86
	and Knoxville & intermediate points	224	1 54	1 10	0 76	0 81
	and Chattanooga.				0 61	0 65
Between Augusta and Chattanooga.	and Decatur and intermediate points.	324	1 70	1 15	0 85	0 90
	and Knoxville & intermediate points.	325	1 70	1 20	0 80	0 85
	and Chattanooga.				0 65	0 70
Between Charleston or Savannah and Chattanooga.	and Decatur and intermediate points.	332	2 20	1 35	1 05	1 10
	and Knoxville & intermediate points.	332	2 20	1 40	1 00	1 05
	and Chattanooga.				0 85	0 90

1st class.—Boxes of Hats, Bonnets and Furniture per foot.
2d class.—Boxes and Bales of Dry Goods, Shoes, Saddlery, Glass, Paints, Oils, (in cans) Drugs, Confectionaries, Shovels, Spades, Scythes, Smiths' Bellows, Baskets, Tubs, Sifters, Brooms and other light articles, per 100 lbs.
3d class.—Molasses, Sugar, Coffee, Liquor, Bagging, Rope, Cheese, Tobacco, Leather, Feathers, Hides, Wool, Copper, Tin, Sheet-iron, Nails, Casks, or Crates of Crockery, Hardware, and other heavy articles not enumerated below
4th class.—Flour, Bacon, (in casks or boxes) Pork, Beef, Lard, Tallow, Butter, Beeswax, Bales of Rags, Ginseng, Green and Dried Fruit, (in casks or sacks) Pig-iron and Linseed Oil, per 100 lbs.
Cotton. Per 100 lbs.

Merchandize shipped from any of the northern ports, must be consigned to R. R. AGENT, CHARLESTON, S. C., or R. R. AGENT, SAVANNAH, GA.: and every package must be marked, care of B. CHANDLER, Chattanooga.

Charges will accompany the goods, and be collected by the boats on the Tennessee river, when delivered to the owner or consignee

No preference in the way of despatch, will be given to any produce intended for their line, but each lot will be sent off as it is received.

The warehouse of the undersigned will be enlarged during the summer, and an apparatus attached for hoisting or lowering freight to the river, without soil or injury.

He will have a train of wagons under his entire control, sufficient to conduct the fall business with great despatch.

B. CHANDLER.
Chattanooga, Tenn., July 1, 1847.

REGULAR RATES BETWEEN ATLANTA AND CHARLESTON OR SAVANNAH.

First class, per foot	$0 20
Second class, per 100 lbs	1 20
Cotton, per 100 lbs	0 55
Third class, per 100 lbs	0 60
Fourth class, per 100 lbs	0 50

FRANKLIN HOUSE,

No. 105 Chestnut Street, Philadelphia.

The undersigned takes the liberty of calling the attention of the readers of the Journal to the fact that the *Office* is removed from New York to the FRANKLIN HOUSE, *Philadelphia*, where he will be always pleased to *meet* and *greet* them. They will not only find a pleasant *Reading Room*, with lots of *foreign* periodicals, treating of *Railroads* and *Machinery*, but they will always find *good-sized* and *airy* rooms—*clean beds*—and a *well supplied* table. If they would have further proof of this, they have only to call, and judge for themselves, and much oblige the proprietor,

D. K. MINOR.

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Volumes of this Journal, for the Years 1838 to 1846, INCLUSIVE, may be had Bound, at Subscription Price, on application at this Office.

☞ *One or two* COMPLETE SETS *of the* RAILROAD JOURNAL *may be had in a few weeks—or as soon as two numbers can be reprinted—by application to the Editor.*

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105 Chestnut Street,
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This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

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One column " "	3 00
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